

Appl. No. : 09/676,895
Filed : October 2, 2000

IN THE CLAIMS:

Please amend Claims 20 and 21 as follows:

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1. (Previously Amended) A watercraft comprising an internal combustion engine and a hull defining a center plane extending generally vertically from bow to stern, the internal combustion engine comprising a cylinder body defining at least one cylinder bore, an axis of the cylinder bore slanting from the center plane, a piston reciprocating within the cylinder bore, a crankshaft, a connecting rod pivotally connecting the crankshaft with the piston, the piston having a pivot axis at which the connecting rod is pivotally coupled with the piston, the pivot axis generally lying within the center plane during at least one point of reciprocal travel of the piston within the cylinder bore, a cylinder head member closing an end of the cylinder bore and defining a combustion chamber with the cylinder bore and the piston, a first passage comprising at least two paths communicating with the combustion chamber, a first valve device comprising at least two valves arranged to selectively connect and disconnect the paths of the first passage with the combustion chamber, a second passage comprising at least one path communicating with the combustion chamber, the number of paths of the second passage being fewer in number than the number of paths of the first passage, and a second valve device comprising at least one valve arranged to selectively connect and disconnect the at least one path of the second passage with the combustion chamber, the first valve device being disposed closer to the center plane than the second valve device.

2. (Previously Amended) The watercraft as set forth in Claim 1, wherein both the first and second valve devices exist on the same side of the center plane within the hull.

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4. (Previously Amended) The watercraft as set forth in Claim 1, wherein the piston reciprocates between a top dead center position and a bottom dead center, and the pivot axis generally lies within the center plane when the piston is at the top dead center position.

5. (Previously Amended) The watercraft as set forth in Claim 1, wherein the second valve device comprises at least two valves.

6. (Previously Amended) The watercraft as set forth in Claim 5, wherein the first valve device comprises three valves and the second valve device comprises two valves.

7. (Previously Amended) The watercraft as set forth in Claim 1, wherein the paths of the first passage are arranged to introduce at least air to the combustion chamber and the at

Appl. No. : 09/676,895
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least one path of the second passage is arranged to receive exhaust gases from the combustion chamber.

8. (Previously Amended) The watercraft as set forth in Claim 1 additionally comprising at least one camshaft arranged to actuate at least some of the valves, and the camshaft extending generally in parallel to the center plane.

9. (Previously Amended) The watercraft as set forth in Claim 8, wherein the engine includes a first camshaft and a second camshaft, the first camshaft actuates at least the valves of the first valve device, the second camshaft actuates at least the at least one valve of the second valve device, and the first camshaft lies closer to the center plane than does the second camshaft.

10. (Previously Amended) The watercraft as set forth in Claim 8, wherein the camshaft has cam lobes configured to push the valves.

11. (Previously Amended) The watercraft as set forth in Claim 1, wherein at least a portion of the first passage extends across the center plane.

12. (Previously Amended) The watercraft as set forth in Claim 11, wherein the first passage is arranged to introduce the air into the combustion chamber.

13. (Previously Amended) The watercraft as set forth in Claim 1, wherein at least a portion of the cylinder bore extends across the center plane.

14. (Previously Amended) The watercraft as set forth in Claim 1, wherein the engine includes at least two cylinder bores, and the cylinder bores are spaced apart from each other along the center plane.

15. (Previously Amended) The watercraft as set forth in Claim 1 additionally including an ignition control system that operates on a four-stroke cycle combustion principle.

16. (Previously Amended) A watercraft comprising an internal combustion engine and a hull defining a center plane extending generally vertically from bow to stern, the internal combustion engine comprising a cylinder body mounted within the hull, the cylinder body defining at least one cylinder bore, a piston reciprocating within the cylinder bore, a crankshaft, a connecting rod pivotally connecting the crankshaft with the piston, the piston having a pivot axis at which the connecting rod is pivotally coupled with the piston, the pivot axis generally lying within the center plane during at least one point of reciprocal travel of the piston within the cylinder bore, a cylinder head member closing an end of the cylinder bore and defining a combustion chamber with the cylinder bore and the piston, the cylinder head member slanting

Appl. No. : 09/676,895
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toward one side of the hull from the center plane, a plurality of air intake paths introducing air to the combustion chamber, and at least one exhaust path receiving exhaust gases from the combustion chamber, the number of air intake paths being greater than the number of the exhaust paths, air intake valves arranged to selectively open and close the air intake paths, at least one exhaust valve arranged to open and close the at least one exhaust path, an intake camshaft arranged to actuate the intake valves, an exhaust camshaft arranged to actuate the exhaust valve, both the intake and exhaust camshafts extending generally in parallel to the center plane, and the intake camshaft lying closer to the center plane than the exhaust camshaft.

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17. (Previously Amended) The watercraft as set forth in Claim 16, wherein at least a portion of at least one of the air intake passages extend across the center plane.

18. (Previously Amended) The watercraft as set forth in Claim 16, wherein at least a portion of the cylinder bore extends across the center plane.

19. (Previously Amended) The watercraft as set forth in Claim 16, wherein both the intake and exhaust camshafts lie on the same side of the center plane within the hull.

20. (Amended) A watercraft comprising an internal combustion engine and a hull defining a center plane extending generally vertically from bow to stern, the internal combustion engine comprising a cylinder body defining at least one cylinder bore, a piston reciprocating within the cylinder bore, a connecting rod coupled to the piston, a crankshaft including at least one connecting rod journal having an axis about which the connecting rod moves, a cylinder head member closing an end of the cylinder bore and defining a combustion chamber with the cylinder bore and the piston, a first passage comprising at least two paths communicating with the combustion chamber, a first valve device comprising at least two valves arranged to selectively connect and disconnect the paths of the first passage with the combustion chamber, a second passage comprising at least one path communicating with the combustion chamber, the second passage having a fewer in number of paths than that of the first passage, and a second valve device comprising at least one valve arranged to selectively connect and disconnect the at least one path of the second passage with the combustion chamber, the first valve device being disposed closer to the center plane than the second valve device, the engine being disposed within the hull such that the axis of the connecting rod journal lies to one side of the center plane as the crankshaft rotates and both the first and second valve devices are disposed on the other side of the center plane.

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Appl. No. : 09/676,895
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21. (Amended) A watercraft comprising an internal combustion engine and a hull defining a center plane extending generally vertically from bow to stern, the internal combustion engine comprising a cylinder body mounted within the hull, the cylinder body defining at least one cylinder bore, a piston reciprocating within the cylinder bore, a connecting rod coupled to the piston, a crankshaft including at least one connecting rod journal having an axis about which the connecting rod moves, a cylinder head member closing an end of the cylinder bore and defining a combustion chamber with the cylinder bore and the piston, a plurality of air intake passages introducing air to the combustion chamber, and at least one exhaust passage receiving exhaust gases from the combustion chamber, the number of air intake passages being greater than the number of exhaust passages, air intake valves arranged to selectively open and close the air intake passages, at least one exhaust valve arranged to open and close the at least one exhaust passage, an intake camshaft arranged to actuate the intake valves, an exhaust camshaft arranged to actuate the exhaust valve, the intake camshaft lying closer to the center plane than the exhaust camshaft, the engine being disposed within the hull such that the axis of the connecting rod journal lies to one side of the center plane as the crankshaft rotates and both the intake and exhaust camshafts rotate about axes that lie on the other side of the center plane.

Please add the following new claims:

22. (New) The watercraft as set forth in Claim 1 additionally comprising an air induction system arranged to introduce air to the combustion chamber through either the first or second passage, the air induction system including a plenum chamber member defining a plenum chamber, the plenum chamber member further defining an air inlet port for the plenum chamber, the plenum chamber member lying across the center plane, the first or second passage being disposed on one side of the center plane, and the air inlet port being disposed on the other side of the center plane.

23. (New) The watercraft as set forth in Claim 22, wherein the air induction system introduces the air to the combustion chamber through the first passage.

24. (New) The watercraft as set forth in Claim 22, wherein the plenum chamber member encloses an air cleaner element disposed between the air inlet port and the first or second passage.

25. (New) The watercraft as set forth in Claim 22, wherein the cylinder head member, together with a plurality of the cylinder bores and a plurality of the pistons, defines a